

Reconstructed primary vertex selection criteria

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Generation and Reconstruction

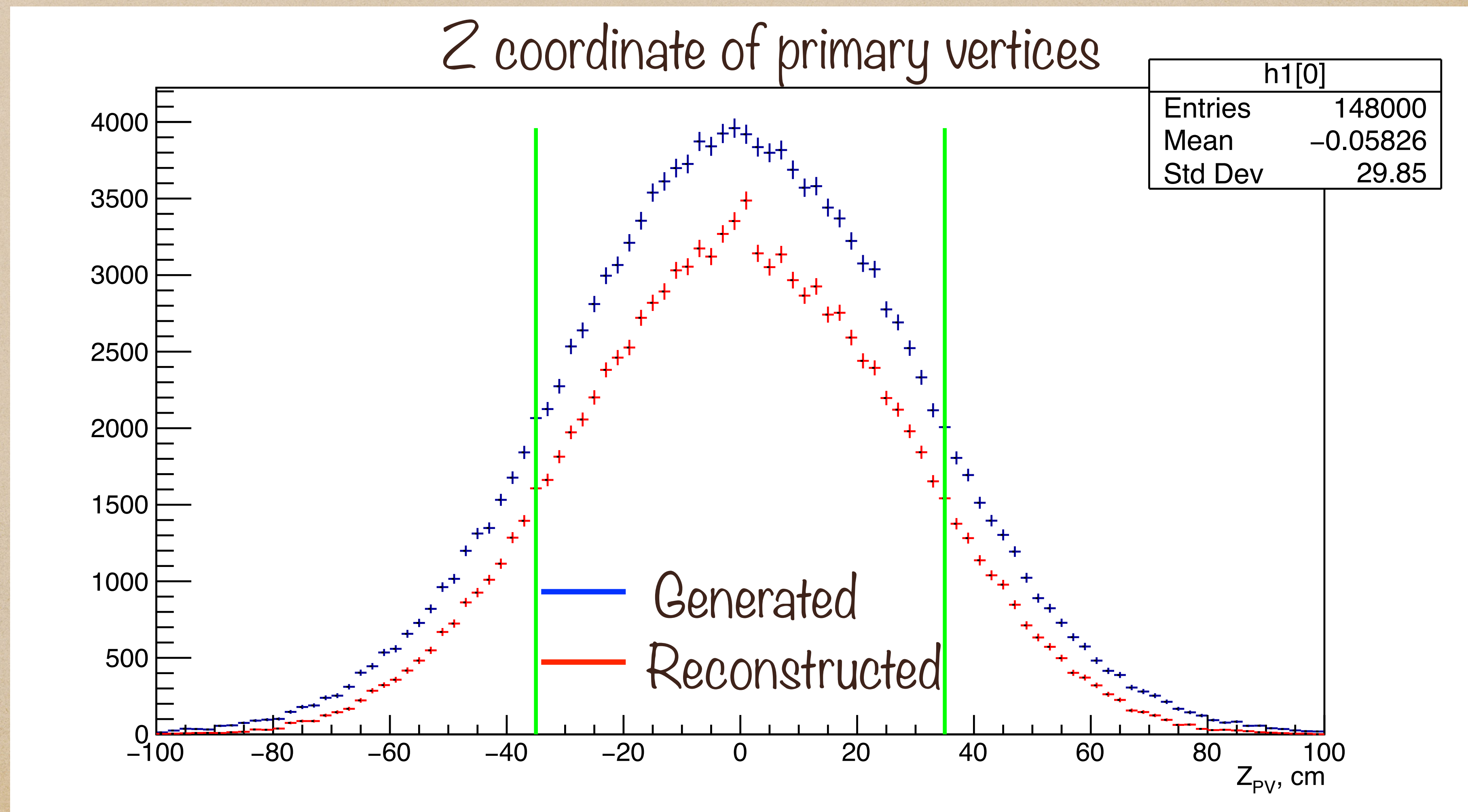
- ◆ Soft QCD (w/o elastic) events with Pythia 8; pp at 27 GeV;
- ◆ SPDRoot v. 4.1.6; ITS: — MAPS 4 layers, no EndCap;
- ◆ Beam: `gRandom->SetSeed(seed);`

```
primGen->SetBeam(0., 0., 0.025, 0.025);//X0,Y0,Xwidth,Ywidth : 250 microns std. dev.  
primGen->SmearGausVertexXY(kTRUE);  
//Important : for uniform smearing or SmearVertexXY(kTRUE), give twice the width you want  
//uniform smearing is done from -width/2 to width/2  
//for Gaussian smearing or SmearGausVertexXY(kTRUE), give sigma or standard deviation you want  
  
primGen->SetTarget(0., 30.);//Z0,Zwidth, 30 cm std. dev.  
primGen->SmearGausVertexZ(kTRUE);  
//Important : for uniform smearing or SmearVertexZ(kTRUE), give twice the width you want  
//uniform smearing is done from -width/2 to width/2  
//for Gaussian smearing or SmearGausVertexZ(kTRUE), give sigma or standard deviation you want
```

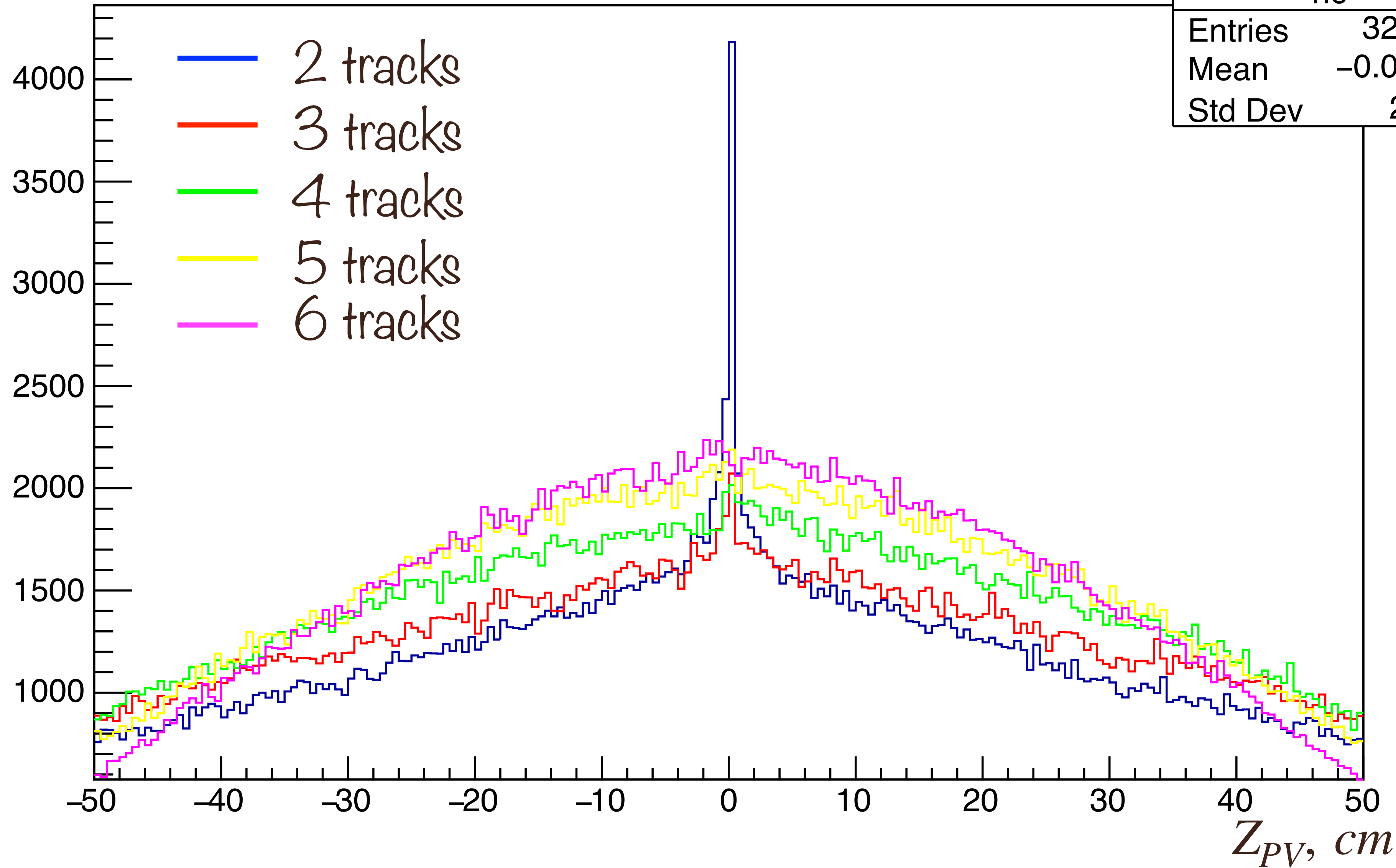
Reconstructed vertices:

SPDVertexRC()

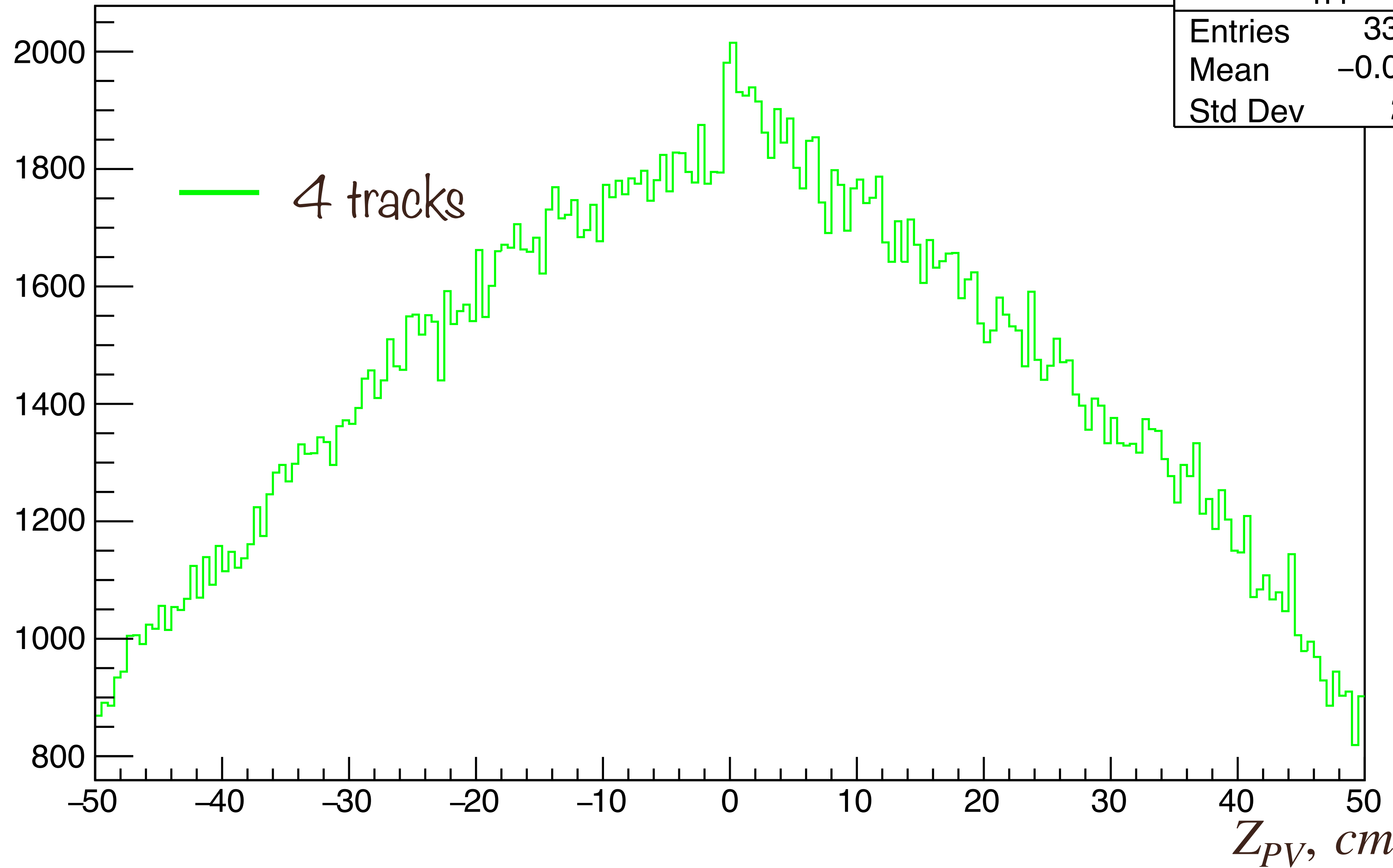
- IsPrimary()
- GetFitPars()



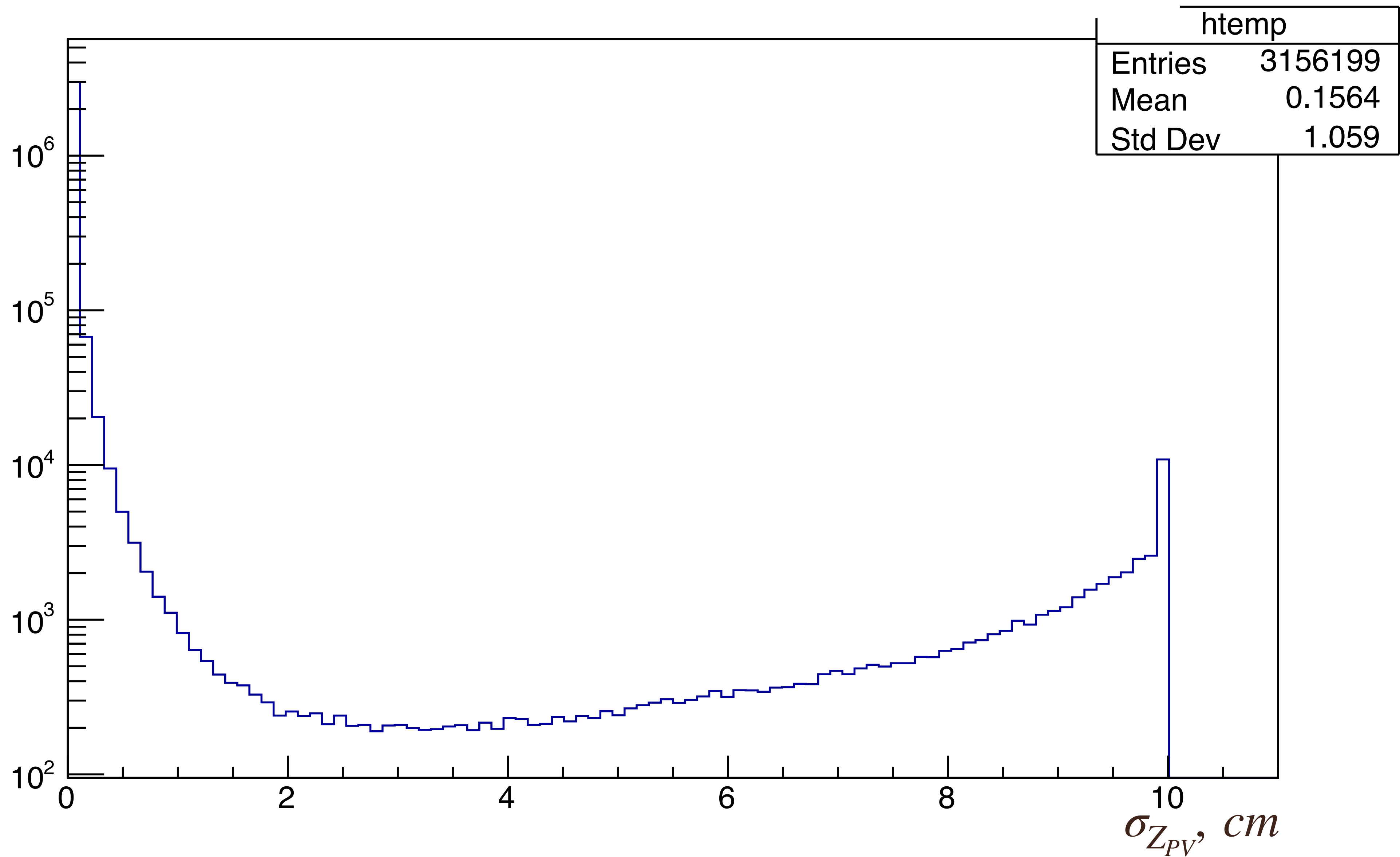
Z coordinate of primary vertices



Z coordinate of primary vertices



h4	
Entries	334953
Mean	-0.01188
Std Dev	26.17



Z coordinate of primary vertices

